



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-0404; Product Identifier 2015-SW-066-AD; Amendment 39-21112; AD 2020-09-01]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters (previously Eurocopter France)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2008-24-04 for Eurocopter France (now Airbus Helicopters) Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters. AD 2008-24-04 required repetitively inspecting the lubricating pump and checking the magnetic chip detector plug (chip detector) and the main gearbox (MGB) oil-sight glass. This new AD retains the requirements of AD 2008-24-04 and allows the option of altering the MGB oil flow distribution as a terminating action for the inspections. This AD was prompted by an alteration developed by Airbus Helicopters of the MGB oil flow distribution that corrects the unsafe condition. The actions of this AD are intended to address an unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the *Federal Register* approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the *Federal Register* approved the incorporation by reference of a certain other publication listed in this AD as of December 30, 2008 (73 FR 71530, November 25, 2008).

ADDRESSES: For service information identified in this final rule, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone 972-641-0000 or 800-232-0323; fax 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2017-0404.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> in Docket No. FAA-2017-0404; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Union Aviation Safety Agency (previously European Aviation Safety Agency) (EASA) AD, any service information that is incorporated by reference, any comments received, and other information. The street address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: James Blyn, Aviation Safety Engineer, Regulations & Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email james.blyn@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to remove AD 2008-24-04, Amendment 39-15744 (73 FR 71530, November 25, 2008) (“AD 2008-24-04”) and add a new AD. AD 2008-24-04 applied to Eurocopter France (now Airbus Helicopters) Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters. The NPRM published in the *Federal Register* on December 31, 2019 (84 FR 72254). The NPRM proposed to continue to require the requirements of AD 2008-24-04 of repetitively inspecting the lubricating pump and checking the chip detector and the MGB oil-sight glass. The NPRM proposed to add an option to alter the lubrication system (modification (MOD) 077222) as a terminating action for the repetitive inspections. For those helicopters that incorporate Mod 077222, the NPRM also proposed to require using mineral oil 0-155 in the combiner gearbox instead of synthetic oil 0-156. This NPRM proposed to exclude helicopters with MOD 077222 from the applicability. An owner/operator (pilot) may perform the visual checks proposed by the NPRM and must enter compliance with that paragraph into the helicopter maintenance records in accordance with Title 14 Code of Federal Regulations (14 CFR) §§ 43.9(a)(1) through (4) and 14 CFR 91.417(a)(2)(v). A pilot may perform this check

because it involves only a visual check and can be performed equally well by a pilot or a mechanic. This check is an exception to the FAA's standard maintenance regulations.

The NPRM was prompted by EASA AD No. 2007-0209R1, dated September 11, 2015 (EASA AD 2007-0209R1), issued by EASA, which is the Technical Agent for the Member States of the European Union. EASA AD 2007-0209R1 followed the issuance of service information by Airbus Helicopters to provide procedures for Airbus Helicopters MOD 077222, which improves the distribution of the oil flow between the accessory modules of the combiner gearbox and the MGB. EASA advises that Airbus Helicopters MOD 077222 provides the same level of safety as the MGB pump inspections.

Accordingly, the EASA AD applies to Airbus Helicopters Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters with a lubrication pump part number 355A32-0700-01, 355A32-0700-02, or 355A32-0701-00 installed, except those with Airbus Helicopters MOD 077222 installed, and requires repetitive MGB pump inspections and chip detector and MGB oil-sight glass checks, and allows MOD 077222 as optional terminating action for the repetitive inspections.

Comments

The FAA gave the public the opportunity to participate in developing this AD, but the FAA did not receive any comments on the NPRM.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA of the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all information provided by EASA and determining the

unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs and that air safety and the public interest require adopting the AD requirements as proposed.

Differences Between this AD and the EASA AD

The EASA AD requires that the initial and repetitive MGB oil inspections be conducted after the last flight of each day without exceeding 10 flight hours between two successive checks. This AD requires those inspections before the first flight of each day and at intervals not to exceed 10 hours time-in-service.

Related Service Information Under 1 CFR part 51

The FAA reviewed Eurocopter Alert Service Bulletin (ASB) No. 05.00.51, dated July 9, 2007 (ASB 05.00.51), and Airbus Helicopters ASB No. 05.00.51, Revision 1, dated July 29, 2015. This service information contains procedures for monitoring the MGB oil pump for wear. Revision 1 of this service information omits helicopters with MOD 077222 installed.

The FAA also reviewed Airbus Helicopters Service Bulletin No. AS355-63.00.25, Revision 1, dated July 29, 2015, and Revision 2, dated June 22, 2017. This service information contains procedures for altering the lubrication system to increase oil flow between the accessory modules of the combiner gearbox and the MGB. This service information also specifies using mineral oil 0-155 in the combiner gearbox instead of synthetic oil 0-156 after completing the alteration. Airbus Helicopters identifies this alteration as MOD 077222. Revision 2 of this service information clarifies a procedure and updates a work card.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Other Related Service Information

The FAA reviewed Eurocopter Emergency ASB No. 05.00.40, Revision 3, dated July 9, 2007. This service information specifies inspecting the MGB magnetic plug for sludge and oil sight for color. If there is sludge or if the oil is dark or dark purple, this service information specifies removing the lubrication pump and inspecting it for certain conditions, and replacing it as necessary. Revision 3 of this service information informs operators that this service information is superseded by ASB 05.00.51.

Costs of Compliance

The FAA estimates that this AD affects 46 helicopters of U.S. Registry. Labor costs are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates that operators may incur the following costs in order to comply with this AD.

- Checking the MGB oil and chip detector condition takes about 0.25 work-hour for an estimated cost of about \$21 per helicopter and \$966 for the U.S. fleet per check.
- Inspecting the lubricating pump takes about 1 work-hour for an estimated cost of \$85 per helicopter and \$3,910 for the U.S. fleet per inspection.
- Replacing the MGB and pump takes about 8 work-hours and costs about \$64,000 (overhauled) in parts for an estimated cost of \$64,680 per helicopter.
- Altering the lubrication system (optional MOD 077222) takes about 4 work-hours and costs about \$2,335 in parts for an estimated cost of \$2,675 per helicopter.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a "significant regulatory action" under Executive Order 12866,
2. Will not affect intrastate aviation in Alaska, and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2008-24-04, Amendment 39-15744 (73 FR 71530, November 25, 2008), and adding the following new AD:

2020-09-01 Airbus Helicopters (previously Eurocopter France): Amendment 39-21112; Docket No. FAA-2017-0404; Product Identifier 2015-SW-066-AD.

(a) Applicability

This AD applies to Airbus Helicopters (previously Eurocopter France) Model AS355E, AS355F, AS355F1, AS355F2, and AS355N helicopters, certificated in any category, with a main gearbox (MGB) lubrication pump (pump) part number 355A32-0700-01, 355A32-0700-02, or 355A32-0701-00, except helicopters with Modification (MOD) 077222 installed.

(b) Unsafe Condition

This AD defines the unsafe condition as insufficient lubrication within an MGB. This condition, if not detected and corrected, could result in failure of the MGB pump,

seizure of the MGB, loss of drive to an engine and main rotor, and subsequent loss of helicopter control.

(c) Affected ADs

This AD replaces AD 2008-24-04, Amendment 39-15744 (73 FR 71530, November 25, 2008).

(d) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

(1) Before the first flight of each day and at intervals not to exceed 10 hours time-in-service (TIS), check the MGB magnetic chip detector plug (chip detector) for any sludge. Also, check for dark oil in the MGB oil-sight glass. The actions required by this paragraph may be performed by an owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with Title 14 Code of Federal Regulations (14 CFR) §§ 43.9 (a)(1) through (4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR 91.417, 121.380, or 135.439. "Sludge" is a deposit on the chip detector that is typically dark in color and in the form of a film or paste, as compared to metal chips or particles normally found on a chip detector. Sludge may have both metallic or nonmetallic properties, may consist of copper (pinion bearing), magnesium (pump case), and steel

(pinion) from the oil pump, and a nonmetallic substance from the chemical breakdown of the oil as it interacts with the metal.

(i) Before further flight, if any sludge is found on the chip detector, remove, open, and inspect the pump.

(ii) Before further flight, if the oil appears dark in color when it is observed through the MGB oil-sight glass, take an oil sample. If the oil taken in the sample is dark or dark purple, before further flight, remove, open, and inspect the pump.

(2) Within 25 hours TIS, after operating both engines at normal operating revolutions per minute (RPM) for at least 20 minutes to ensure the MGB oil temperature has stabilized, inspect the oil pump for wear by following the Accomplishment Instructions, paragraph 2.B.2., steps 1. through 6., of Eurocopter Alert Service Bulletin (ASB) No. 05.00.51, dated July 9, 2007 (ASB 05.00.51), or Airbus Helicopters ASB No. 05.00.51, Revision 1, dated July 29, 2015 (ASB 05.00.51 Rev 1).

(i) Record the outside air temperature (OAT) and rotor speed (NR RPM) and plot the point at which they intersect using the graph in Figure 1 or 2 of ASB 05.00.51 or ASB 05.00.51 Rev 1.

(ii) If the point on the graph at the intersection of the recorded OAT and the NR RPM falls within:

(A) Zone 3—Before further flight, replace the MGB and pump with an airworthy MGB and pump.

(B) Zone 2—At intervals not to exceed 25 hours TIS, repeat the inspection procedures by following the Accomplishment Instructions, paragraph 2.B.2, steps 1. through 6., of ASB 05.00.51 or ASB 05.00.51 Rev 1. After being classified in “Zone 2,”

you must obtain two successive inspections separated by at least 24 hours TIS that fall within Zone 1 before you can begin to inspect at intervals not to exceed 110 hours TIS by following paragraph (f)(2)(ii)(C) of this AD for Zone 1.

(C) Zone 1—At intervals not to exceed 110 hours TIS, repeat the inspection procedures by following the Accomplishment Instructions, paragraph 2.B.2., steps 1. through 6., of ASB 05.00.51 or ASB 05.00.51 Rev 1.

(iii) Compliance with paragraphs (f)(2)(i) and (ii) of this AD constitutes terminating action for the checks and inspections required by paragraph (f)(1) of this AD.

(3) As an optional terminating action for the requirements in this AD, alter the lubrication system for the MGB in accordance with the Accomplishment Instructions, paragraphs 3.B.2.a. through 3.B.3 of Airbus Helicopters Service Bulletin No. AS355-63.00.25, Revision 1, dated July 29, 2015, or Revision 2, dated June 22, 2017. Mineral oil 0-155 is required after compliance with this alteration.

Note 1 to paragraph (f)(3) of this AD: Airbus Helicopters identifies alteration of the lubrication system as MOD 077222.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Section, Rotorcraft Standards Branch, FAA, may approve AMOCs for this AD. Send your proposal to: James Blyn, Aviation Safety Engineer, Regulations & Policy Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests that you notify your principal

inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

(h) Additional Information

(1) Eurocopter Emergency Alert Service Bulletin No. 05.00.40, Revision 3, dated July 9, 2007, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, use the contact information in paragraphs (j)(5) and (6).

(2) The subject of this AD is addressed in European Union Aviation Safety Agency (previously European Aviation Safety Agency) (EASA) AD No. 2007-0209R1, dated September 11, 2015. You may view the EASA AD on the Internet at <https://www.regulations.gov> in Docket No. FAA-2017-0404.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6320, Main Rotor Gearbox.

(j) Material Incorporated by Reference

(1) The Director of the *Federal Register* approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Airbus Helicopters Alert Service Bulletin No. 05.00.51, Revision 1, dated July 29, 2015.

(ii) Airbus Helicopters Service Bulletin No. AS355-63.00.25, Revision 1, dated July 29, 2015.

(iii) Airbus Helicopters Service Bulletin No. AS355-63.00.25, Revision 2, dated June 22, 2017.

(4) The following service information was approved for IBR on December 30, 2008 (73 FR 71530, November 25, 2008).

(i) Eurocopter Alert Service Bulletin No. 05.00.51, dated July 9, 2007.

(ii) [Reserved]

(5) For Airbus Helicopters and Eurocopter service information identified in this AD, contact Airbus Helicopters, 2701 N. Forum Drive, Grand Prairie, TX 75052; telephone 972-641-0000 or 800-232-0323; fax 972-641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>.

(6) You may view this service information at FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 17, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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